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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/743,710

12/24/2003

Norbert Brun

0589-1001

8329

466

7590

03/16/2006

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EXAMINER

LEE, GUNYOUNG T

ART UNIT

PAPER NUMBER

2875

DATE MAILED: 03/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/743,710	Applicant(s) BRUN ET AL.	
	Examiner Gunyoung T. Lee	Art Unit 2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 January 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4-12,14-18 and 20-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-12,14-18 and 20-22 is/are rejected.
- 7) ☒ Claim(s) 23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Amendment*

1. Applicant's amendment filed on January 09, 2006 has been entered:
  - Claims 1 has been amended;
  - Claims 3, 13 and 19 have been cancelled;
  - Claims 21-23 have been added.

### *Response to Arguments*

2. Applicant's arguments filed on January 09, 2006 with respect to the objections to the drawing (Fig. 1), specification and claim 1 (Remarks, page 11) have been fully considered and are persuasive. Therefore, the objections to the drawing (Fig. 1), specification and part of claim 1 have been withdrawn. However, the objection to the claim 1 due to lack of proper antecedent basis is still pending.
3. Applicant's arguments regarding newly amended claims 1-2, 4-12, 14-20 and added claims 21-23 filed on January 09, 2006 have been fully considered but they are not persuasive.
4. Applicant's arguments regarding newly amended claim 1-2, 4-12, 14-20 and added claims 21-23 addressed (Remarks, pages 12-16) that the claimed vertical reflector is "**designed to** produce a long-range beam" and "**designed to** give images of the light source", and the claimed ellipsoidal reflector "gives a wide beam of shorter range". However, the applicant's arguments are not persuasive, because it is clearly

cited in the MPEP that the functional statement that does not direct to structural limitations of an apparatus has not been given any patentable weight (see MPEP § 2114). Therefore, the applicant's argument based on those functional statements are not persuasive. Further, it has been held that "apparatus claims cover **what** a device is, **not what** a device **does**." *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990).

5. In response to applicant's arguments regarding newly amended claims 1-2, 4-12, 14-20 and added claims 21-23 that the light source (filament in Fig. 1) of Kreschmer et al. cited in the Office Action dated September 07, 2005 is not running transversely to the optical axis of a reflector (Remarks, page 13), Kreschmer et al., disclose a headlight having a **conventional filament** as a light source which is **particularly positioned** with respect to the location of the focus of the **reflector** (Fig. 12). It is well known and available knowledge to one of ordinary skill in the art at the time Kreschmer et al.'s invention was made that a filament in a headlight lamp should be supported by lead-in wires at the both ends of the filament for electrical connection, and the filament is generally in zigzag or helical shape with a longitudinal axis, which are not well illustrated in Kreschmer et al.. It is also well known and accepted in the art that the longitudinal axis of the filament is **running transversely** to the optical axis of a curved reflector when the filament is required to be **particularly positioned** with respect to the **reflector** or reflector's optical geometry such as the focal point or optical axis to obtain a desired function without disturbing other optical characteristics of the headlight beam.

This is clearly shown in the following references that are published at the time of Kreschmer et al.'s invention was made: (a) Bergin et al. (US 4,569,006) disclose an automobile headlight (Fig. 2) having a filament (Fig. 1, 42) which is running transversely to the optical axis (Fig. 2, OA) of a reflector (13); (b) Coliandris et al. (US 4,795,388) disclose an automobile headlight (Fig. 2) having a filament (42) which is running transversely to the optical axis (OA) of a reflector (13); (c) Gaugel et al. (US 4,479,072) disclose a headlight (Fig. 5) having a filament which is running transversely to the optical axis of a reflector (12); (d) Pitkjaan et al. (US 4,241,391) disclose a headlamp (Fig. 1) having a filament (28) which is running transversely to the optical axis of a reflector (16); and (e) Nixon (US 4,180,755) discloses a headlamp (Fig. 2) having a filament (Fig. 3, 52, 70) which is running transversely to the optical axis (74) of a reflector. Therefore, the filament (light source) of Kreschmer et al. which is required to be particularly positioned with respect to the focal point (Fig. 1, 17) of a reflector (col. 2, lines 46-50) should be running transversely with respect to the optical axis of the reflector, even though it is not well illustrated in the figures.

6. In response to applicant's arguments regarding 1-2, 4-12, 14-20 and added claims 21-23 that "Kreschmer et al. do not disclose an ellipsoid reflector" (Remarks, page 13), the descriptions "a surface having vertical and horizontal meridian portions that are curves of higher order ellipses" and "a ellipsoid surface" are mathematically equivalent, because the vertical and horizontal cross sections (meridian portions) of the ellipsoid surface are ellipses.

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7. In response to applicant's arguments regarding newly amended 1-2, 4-12, 14-20 and added claims 21-23 that the striations in the verticalized reflector of Takada are not inclined toward one another (Remarks, page 14), it has been held by the courts that a change in shape or configuration, without any criticality, is nothing more than one of numerous shapes that one of ordinary skill in the art would find obvious to provide based on the suitability for the intended final application. See *In re Dailey*, 149 USPQ 47 (CCPA 1966).

#### ***Information Disclosure Statement***

8. The information disclosure statement filed 12/24/2003 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

#### ***Claim Objections***

9. Claim 1 is objected to because of the following informalities: the phrases "the focal point" in line 3, "the wall" in line 7, "the plan" in line 8, "the geometric axis" in lines 7-8, and "the opposite side" in line 16 of claim 1 lack proper antecedent bases. Further, the phrase "the focal point of the reflector" in lines 3-4 of claim 1 renders the claim

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indefinite, because two distinctive (internal and external) focal points are addressed in claim 1. Appropriate correction is required.

10. Claim 21 is objected to because of the following informalities: the phrases “the focal point” in line 3, “the wall” in line 7, “the plan” in line 8, “the geometric axis” in lines 7-8, and “the opposite side” in line 16 of claim 21 lack proper antecedent bases. Further, the phrase “the focal point of the reflector” in lines 3-4 of claim 21 renders the claim indefinite, because two distinctive (internal and external) focal points are addressed in claim 21. Appropriate correction is required.

11. Claim 22 is objected to because of the following informalities: the phrases “the focal point” in line 3, “the wall” in line 7, “the plan” in line 8, “the geometric axis” in lines 7-8, and “the opposite side” in line 16 of claim 22 lack proper antecedent bases. Further, the phrase “the focal point of the reflector” in lines 3-4 of claim 22 renders the claim indefinite, because two distinctive (internal and external) focal points are addressed in claim 22. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

12. Claims 15 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete because the claims 15 and 17 have dependency on the base claim 3 which has been canceled (see MPEP § 608.01, (n), V)

***Claim Rejections - 35 USC § 102***

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –  
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. The claims must be given their broadest reasonable interpretation. See MPEP § 2111.

15. The functional statement that does not direct to structural limitations of an apparatus has not been given any patentable weight (see MPEP § 2114). Therefore, the functional statements “vertical reflector being designed to produce a long-range beam” and “ellipsoidal reflector giving a wide beam of shorter range” in lines 17-20 of claim 1, in lines 17-20 of claim 21, and in lines 19-22 of claim 22, and “vertical reflector being designed to give images of the light source at a distance of several tens of meters from the headlight” in lines 21-22 of claim 21 are **not further given any patentable weight**.

16. Claims 21 and 22 is rejected under 35 U.S.C. 102(b) as being anticipated by Kretschmer et al. (US 4,772,987).

17. Kretschmer et al. disclose a headlight (Fig. 1).

18. In regards to claims 21 and 22, as best understood by Examiner, Kretschmer et al. disclose:



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- A reflector (Fig. 1, 11) and a light source (15) running transversely to the optical axis (16) of the reflector and placed near a focal point and on the optical axis (16) of the reflector (11);
- Wherein the transverse light source (Fig. 1, 15) placed near the internal focal point of an ellipsoidal reflector (11) (col. 2, lines 42-44);
- Wherein a wall of the ellipsoidal reflector (Fig. 1, 11) has a cutout situated on one side of a plane passing through the geometric axis of the light source and parallel to the optical axis of the ellipsoidal reflector (11);
- A lens (Fig. 1, 21) with an optical axis parallel to or coincident with that of the ellipsoidal reflector (11) is placed in front of the reflector;
- A verticalized reflector (Fig. 1, 12) is arranged on a opposite side of the cutout to the most-part of the ellipsoidal reflector (11) (claim 1);
- Wherein light source (Fig. 1, 15) is housed in the ellipsoidal reflector (11).

***Claim Rejections - 35 USC § 103***

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

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the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

21. Claims 1-2, 4-7, 11-12, 14, 16, 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kretschmer et al. (US 4,772,987) in view of Takada (US 6,435,703).

22. Kretschmer et al. was discussed in the rejections of claims 21 and 22 above.

23. In regards to claims 1-2, 4-7, 11-12, 14, 16, 18 and 20, as best understood by Examiner, Kretschmer et al disclose a headlight having:

- A reflector (Fig. 1, 11) and a light source (15) running transversely to the optical axis (16) of the reflector and placed near the focal point of the reflector (11) (claim 1);
- Wherein the transverse light source (Fig. 1, 15) placed near the internal focal point of an ellipsoidal reflector (11) (col. 2, lines 42-44) (claim 1);
- Wherein a wall of the ellipsoidal reflector (Fig. 1, 11) has a cutout situated on one side of a plane passing through the geometric axis of the light source and parallel to the optical axis of the ellipsoidal reflector (11) (claim 1);

- A lens (Fig. 1, 21) with an optical axis parallel to or coincident with that of the ellipsoidal reflector (11) is placed in front of the reflector (claim 1);
- A verticalized reflector (Fig. 1, 12) is arranged on the opposite side of the cutout to the most-part of the ellipsoidal reflector (11) (claim 1);
- Wherein light source (Fig. 1, 15) is housed in the ellipsoidal reflector (11) (claim 1);
- Wherein the surfaces of the verticalized reflector (Fig. 1, 12) have a focal point that lies near the light source (15) (claim 2);
- Wherein the ellipsoidal reflector (Fig. 1, 11) is situated above the horizontal plane while the verticalized reflector (12) is situated below the plane (claims 6, 16, 18);
- Wherein the ellipsoidal reflector (Fig. 1, 11) has a cover (19) situated near the external focal point so that the outgoing beam lies essentially below a determined level (claims 7, 20);
- Wherein the upper edge of the cover (Fig. 19) is situated below the horizontal plane passing through the optical axis (16) of the reflector (11) (col. 2, lines 53-57).

24. However, Kretschmer et al. do not expressly disclose:

- A verticalized reflector having striations delimiting at least one central facet and two lateral facets that are inclined toward one another (claim 1);
- The beam produced by the verticalized reflector has an aperture at most equal to  $\pm 20^\circ$  on each side of the optical axis (claims 4, 14);

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- The beam produced by the ellipsoidal reflector has an aperture of about  $\pm 40^\circ$  on each side of the optical axis (claim 5);
- A verticalized reflector designed to create a V-shape cutoff (claims 7, 20);
- A verticalized reflector (34A) is situated above the plane passing through the transverse axis (Ax) of the light source and parallel to the optical axis of the reflector (claim 11);
- A discharge bulb light source (claim 12);

25. Takada discloses a vehicular headlamp having:

- A verticalized reflector (Fig. 3, 34A) having striations delimiting at least one central facet (34s1) and two lateral facets (34s2, 34s3);
- A verticalized reflector (34A) is situated above the plane passing through the transverse axis (Ax) of the light source and parallel to the optical axis of the reflector;
- A discharge bulb light source (col. 4, line 53).

26. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the verticalized reflectors and the discharge light bulb of Takada for the headlight system of Kretschmer et al. to control the horizontal diffusion deflecting reflection with greater precision for the purpose of improving the external appearance of the projection-type headlamp.

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27. In regards to the inclined striations (claim 1), it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the striations in the headlight system of Kretschmer et al. modified by Takada, since it has been held by the courts that a change in shape or configuration, without any criticality, is nothing more than one of numerous shapes that one of ordinary skill in the art would find obvious to provide based on the suitability for the intended final application. See *In re Dailey*, 149 USPQ 47 (CCPA 1966).

28. In regards to (a) the beam produced by the verticalized reflector and having an aperture at most equal to  $\pm 20^\circ$  (claims 4, 14, 15), (b) the beam produced by the ellipsoidal reflector and having an aperture of about  $\pm 40^\circ$  (claim 5), and (c) a verticalized reflector designed to create a V-shape cutoff (claims 7, 20), Takada acknowledges that the reflectors are not limited to specific configuration (col. 2, lines 25-28). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to produce the beams reflected by the verticalized reflector and the ellipsoidal reflector with aperture angles of  $\pm 20^\circ$  and  $\pm 40^\circ$  respectively and to design the verticalized reflector to create a V-shape cutoff, since it has been held that discovering an optimum value of a result-effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

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29. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kretschmer et al. (US 4,772,987) and Takada (US 6,435,703) as applied to claims 1 and 7 above.

30. In regards to claims 8-10, as best understood by Examiner, Kretschmer et al. and Takada disclose the invention substantially as claimed except for:

- The upper edge of the cover situated below the horizontal plane passing through the optical axis of the reflector, particularly about 1.5 mm below (claim 8);
- The optical axis of a lens is offset with respect to the optical axis of the ellipsoidal reflector (claim 9);
- A lens arranged in such a way that its focal point is behind, particularly about 1.5 mm behind, the external focal point of the ellipsoidal reflector (claim 10).

31. It would have been obvious to one of ordinary skill in the art at the time of the invention to position the cover and the lens at a particular location with respect to the optical axis or the focal point of the reflector, since it has been held that discovering an optimum value of a result-effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

### ***Allowable Subject Matter***

32. Claim 23 is objected as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form **incorporating all** of the limitations of the base **claim 22** and any intervening claims.

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33. Claim 23 is allowable over the prior art of record since the cited references taken individually or in combination fails to particularly disclose a headlight system having all the features in claims 23 as well as 22 which includes "a verticalized reflector **separated** from an ellipsoidal reflector by a **gap**" wherein "the verticalized reflector is arranged on the opposite side of the cutout to the most-part of the ellipsoidal reflector", which is not taught by the prior art of record.

### ***Conclusion***

34. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bergin et al. (US 4,569,006), Coliandris et al. (US 4,795,388), Gaugel et al. (US 4,479,072), Pitkjaan et al. (US 4,241,391) and Nixon (US 4,180,755) show vehicle headlights having a light source filament(s) which is running transversely to the optical axis of a reflector.

35. **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gunyoung T. Lee whose telephone number is (571) 272-8588. The examiner can normally be reached between 7:30 - 4:00 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra L. O'Shea can be reached at (571) 272-2378. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GTL  
3/13/2006



**JOHN ANTHONY WARD**  
**PRIMARY EXAMINER**